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April 2, 1997

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APR 2 1997

Federal Communications Commission
Office of Secretary

William F. Caton
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: Erratum to Comments of GTE
CC Docket No. 96-263

Dear Mr. Caton:

This letter serves to correct a typographical error in the Comments of GTE in CC Docket No. 96-263, *In the Matter of Usage of the Public Switched Network by Information Service and Internet Access Providers*. Attached are 18 corrected copies of the "Affidavit of Alton Blackmon," submitted to the Commission as "Attachment A" of the Comments of GTE. Mr. Blackmon has reviewed and consented to this correction, as indicated by his signing the corrected Affidavit.

In the fourth paragraph of the third page of the affidavit the last sentence should read: "At 24 trunks per T1 span the quantity of T1 spans required is **1,136 to 2,045** (27,273 divided by 24 = 1,136 T1 spans; 49,092 divided by 24 = 2,045 T1 spans)." Bolded text indicates the correction of the typographical error.

Respectfully submitted,



R. Paul Margie
(Admitted in New York only)

Enclosures

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Federal Communications Commission
Office of Secretary


CERTIFICATE OF SERVICE

I, R. Paul Margie, hereby certify that on this 2nd day of April, 1997, I caused true copies of the forgoing to be hand delivered to the following persons:

* Competitive Pricing Division
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W., Room 518
Washington, D.C. 20554

International Transcription Service
2100 M Street, N.W.
Room 140
Washington, D.C. 20554

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R. Paul Margie

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Affidavit of Alton Blackmon

Federal Communications Commission
Office of Secretary

1. My name is Alton L. Blackmon. I am Group Manager-Infrastructure Dimensioning for GTE Telephone Operations. My business address is 545 E. John Carpenter Frwy, Irving, Texas. My principal duties and responsibilities include the direction and supervision of network traffic standards associated with voice and data communications.

2. In conjunction with these responsibilities, I have directed the preparation of the attached Internet Impact Report (3/97).

3. Internet Impact Report Attachment A .

The purpose of this report is to identify the portion of network hardware costs that GTE incurred to accommodate 1996 internet traffic¹ demand. Since historically there was no practical way to precisely identify the internet traffic from voice traffic on our network (internet traffic and voice traffic use the same common facilities) we had to make certain assumptions based on historical data (described below) that will result in reasonable estimates of the traffic attributable to Internet usage. Once the percent of internet traffic during the office busy hour is known, the hardware costs associated with this traffic can be determined.

A) Known study data:

- For year end 1996, GTE had 17,356,000 Access lines (counted using methodology for ARMIS 43.05 report).
- GTE has determined, based on quarterly internet audits, that the average holding time for an Internet call is 10 CCS.
- Recent market surveys² indicate that 11% percent of GTE telephone customers have access to the Internet. Thus, it is reasonable to assume that approximately 1,909,160 GTE customers have access to the Internet ($0.11 \times 17,356,000$)
- Traffic studies of existing interoffice message trunks have determined that, on average these trunks have a capacity of 28 CCS.

¹ When I refer to Internet traffic, I am referring to the traffic on the LEC's network that is originated by the LEC's subscriber and typically is routed from the originating end office over LEC interoffice facilities to the terminating wire center that serves the Internet Service Provider ("ISP").

² Q.E.D. Alert No. 123 (2/97) market survey.

- Analysis of switch line modules³ with 6:1 concentration (the average concentration ratio for GTE's network) on average cost approximately \$166,200.
- On average the cost of interoffice T-1 (24 channels) facility is \$14,000.
- Based on a review of our network, the average switch Line Unit capacity is 4602 CCS.

B) Assumptions necessary to complete the analysis.

- It is reasonable to assume that between 5% to 8% of GTE customers that subscribe to internet access will access the internet during their office busy hour. A rather wide range of estimates was chosen simply to establish the magnitude of the impact knowing that precise data is not available. But, given the public's interest in accessing the Internet for timely news, weather and stock updates, the actual percentage is likely to be in this range. Thus, across our network, 95,458 to 152,732 of our customers (i.e., 5 - 8% of our customers that have Internet access) are using the Internet during the peak usage periods of our network.
- Due to our network design and the fact that Internet Service Providers desire to have the largest local calling areas available, we believe that 80% to 90% of our customers access internet by terminating calls to wire centers other than their own end office⁴. Thus, in order to complete these calls, our interoffice facilities are used. This results in anywhere from 76,366 to 137,458 of our customers using interoffice facilities during their office busy hour. (80% of 95,458 is 76,366 customers. 90% of 152,732 is 137,458 customers.)

³ Switch line units are configured to handle various traffic demand loads through the use of concentration ratios. Line modules can have concentration ratios varying from 4:1 to 8:1. A 4:1 concentrated line module will handle fewer lines than a 6:1 or 8:1 unit. Correspondingly, the average daily busy hour per line capacity for lines on a 4:1 unit will be higher than for a switch line unit using a 6:1 or 8:1 concentration ratio. In general the lower the concentration of the unit, the higher its cost. GTE's network has line modules of each concentration. The 6:1 concentration ratio was selected as a representative unit for this study analysis.

⁴ Internal analysis of office configurations (interoffice calling capabilities) and the local offices that ISPs are using as their serving wire center indicate that on the average ISPs can receive traffic from 9 to 10 surrounding offices via the

Conclusions:

- 1) GTE customers that access the internet on average place 954,580 to 1,527,320 CCS of daily office busy hour traffic on our network. This is simply the product of the number of customers accessing the Internet during the busy hour and the average Internet holding time of 10 CCS. (10 CCS x 95,458 customer = 954,580 CCS. 10 CCS x 152,732 customers = 1,527,320 CCS.)
- 2) The approximately one to one and one half million CCS of traffic during the office busy hour requires GTE to install addition switch line units. The total number of line units required to accommodate this traffic is derived by dividing the Internet office busy hour CCS demand by the GTE network average line module CCS capability. 954,580 CCS divided by 4602 average CCS per line module = 207 line modules required. 1,527,320 CCS divided by 4602 CCS per average line module = 331 line modules required. Thus, 207 to 331 line modules are being used to accommodate the office busy hour internet traffic.
- 3) GTE customers that access the internet on average generate 763,660 CCS to 1,374,580 CCS of busy hour interoffice traffic. This is simply the number of customers that are utilizing the interoffice facilities during the office busy hour times on average internet holding time of 10 CCS. (10 CCS x 76,366 customers = 763,660 CCS and 10 CCS x 137,458 customers = 1,374,580 CCS.)
- 4) The number of interoffice facilities required to accommodate internet busy hour requirements is derived by dividing the interoffice usage by 28 CCS, the usage on the average trunk in GTE's network. (763,660 CCS divided by 28 CCS per trunk = 27,273 trunks required and 1,374,580 CCS divided by 28 CCS per trunk = 49,092 trunks required). At 24 trunks per T1 span the quantity of T1 spans required is 1,136 to 2,045 (27,273 divided by 24 = 1,136 T1 spans; 49,092 divided by 24 = 2,045 T1 spans).
- 5) Total cost per element is determined by multiplying quantity of hardware element required times average unit cost.

For Line Modules: 207 units X \$166,200 per unit = \$34.4 Million
331 units X \$166,200 per unit = \$55.0 Million

For Spans: 1,136 spans X \$14,000 per span = \$15.9 Million
2,045 spans X \$14,000 per span = \$28.6 Million

local calling plan. Thus, the 80 to 90% assumption is a reasonable estimate of Internet access calls requiring our interoffice facilities.

6) Therefore, it is reasonable to assume that GTE was required to place additional hardware to accommodate internet access traffic during the office busy hour ranging from \$50.3 Million to \$83.6 Million.

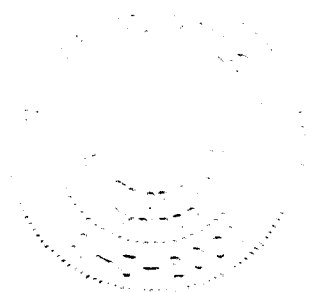
The affiant says nothing further.

Al Blackmon

Alton L. Blackmon

Subscribed and sworn to before me
on this 31st day of March, 1997.

Sarah M. Hulsey
my commission expires on 3/5/01.



Attachment A
GTE Telops - Internet Impact Report 3/97

Purpose: Identify network hardware costs that GTE Telops has incurred to accommodate internet traffic demand, as of Dec 1996.

- 1) GTE Customer data:
 - o GTE had 17,356,000 access lines (1996 - ARMIS 43-05 report)
- 2) Market Study data:
 - o 11% of GTE customers access internet = 1,909,160 (QST survey 2/1997)
- 3) Internet Study data:
 - o Average internet user busy hour CCS = 10 CCS (GTE Telops internal survey)
- 4) Assumptions:
 - o 5 to 8% of GTE customers that subscribe to internet services access the internet during their office daily busy hour = 95,458 to 152,732
 - o 80 to 90% of these customers require interoffice facilities = 76,366 to 137,458 require interoffice facilities daily.
 - o Average message trunk capacity of 28 CCS
 - o Average Swt Line Unit Capacity = 4602 CCS
 - o Average 6:1 Line unit Cost = \$166,200
 - o Average 24 channel span unit cost = \$14,000
 - o Voice and Internet demands are independent network demand events.
While this may not be true in the future it is considered true for the past.

Conclusions:

- 1) In total, for 1996 activity,
 - o GTE customers that access the internet on average generate 954,580 to 1,527,320 total CCS during the office daily busy hour.
 - o GTE customers that access the internet on average generates 763,660 to 1,374,580 total CCS of daily busy hour interoffice facility requirements.
- 2) Total equipment/facility internet daily busy hour requirements:
 - o Switch Line Units/Modules
207 to 331 switch line units/modules
 - o Interoffice Spans
27,273 to 49,092 links or 1,136 to 2,045 (24 channel) spans
- 3) Total Cost to accommodate internet daily busy hour demand:
 - A) Swt Line Units @ 166,200 per unit = \$34.4M to \$55.0M
 - B) Spans cost @ \$14,000 per span = \$15.9M to \$28.6M